



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,824	09/12/2003	John D. Hottovy	CPCM:0018/FLE 210319US1	7868
7590	08/04/2005		EXAMINER	
Micheal G. Fletch FLECHER YODER P. O. Box 692289 Houston, TX 77269-2289			TESKIN, FRED M	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/660,824

Applicant(s)

HOTTOVY ET AL.

Examiner

Fred M. Teskin

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2005.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-16 and 18-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 1,2,4-8,11-16 and 18-20 is/are allowed.
6) ☒ Claim(s) 9 and 10 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

The reply of May 20, 2005, has been entered in full. Claims 1, 2, 4-16 and 18-20 are currently pending and under examination.

The previously indicated allowability of claim 9 is withdrawn in view of the newly discovered prior art to Mitacek. Rejections based on the new reference follow.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 3556730 to Mitacek.

Claim 9 is drawn to a polymerization process, comprising:

polymerizing in a loop reaction zone, at least one olefin monomer to produce a fluid slurry comprising a liquid medium and solid olefin polymer particles;

withdrawing, through a take-off valve, a portion of the fluid slurry as withdrawn slurry; and

repetitively fully closing and opening the take-off valve at set intervals, such that the withdrawn slurry is removed from the reactor discontinuously;

wherein the take-off valve is not located in a settling leg and wherein the take-off valve is at least 60 % open at set intervals.

In applying the cited reference, examiner construes the phrase "at least 60 % open" as inclusive of 100 %, i.e., a fully opened take-off valve. Thus, claims 9 and 10

Art Unit: 1713

are considered readable on processes wherein the take-off valve is not located in a settling leg and wherein the take-off valve is fully open at set intervals.

Mitacek broadly provides a sampling system for obtaining a fluid sample from a stream containing solid particles in suspension. More specifically, Mitacek discloses a process (and apparatus) for obtaining a total fluid sample from a stream containing *particulate solid polymer in suspension* in a liquid lighter than the solids and also containing dissolved gas, and for taking *intermittent* samples directly from the reaction mixture in such a manner that continuous analysis is obtained. (Col. 1, lines 23-25 and col. 3, lines 9-23.) The intermittent sampling is effected by *periodically* removing a reactive fluid into a treating zone, the reactive fluid comprising particulate solids in suspension in a liquid lighter than the solids and also containing dissolved gas, adding a reaction termination fluid to said reactive fluid, thus forming a non-reactive fluid, and transferring the non-reactive fluid from the treating zone to a separation zone. (*Id.*, col. 3, lines 32-40.)

Referring to the figure of Mitacek, there is depicted a particle-form reactor represented as either a stirred-tank or *continuous flow loop reactor*, from which the reactive fluid sample is taken *via* valve **12**. As apparent from the figure, valve **12** is not located in a settling leg of reactor **10**. In operation, valve **12** opens only long enough to take a sufficient size sample such that analytical error is minimized, then closes and valve **16** (closed during operation of valve **12**) opens to admit reaction termination fluid into treating zone **14** from source **30**. (Col. 4, lines 30-45.)

The stated purpose of the termination fluid is to render the catalyst system in the system inactive so that no further polymerization takes place in the sampling system. Suitable catalyst systems are said to be those capable of polymerizing 1-olefins under conditions such that solid polymer in particle form is produced. (Col. 4, lines 45+.)

Operation of the sampling system of Mitacek by opening and closing valve **12** at periodic time intervals during an olefin polymerization reaction is illustrated in the working example. See in particular the valve cycle sequence detailed in the table in column 7 as well as column 8, lines 2-4, indicating removal of additional samples at a frequency of about every 3 minutes.

Mitacek differs from claim 9 only in that the features of fully closing and fully (100 %) opening the take-off valve at set intervals are not explicitly disclosed.

However, based on the above discussion, Mitacek would have taught those skilled in the art to periodically withdraw, from a loop reaction zone, a portion of fluid slurry comprising solid olefin polymer particles in a liquid medium at set intervals, via a valve **12** corresponding to the "take-off valve" of the claimed invention.

Further, when periodically withdrawing the fluid slurry sample, it would have been obvious to one of ordinary skill in the art to *fully* open valve **12** so as to ensure the sample taken is of sufficient size and uniformity to minimize analytical error and to then fully close that valve to prevent termination fluid (admitted to treatment zone **14** via valve **16**) from entering the particle-form reactor of Mitacek and possibly deactivating the polymerization catalyst.

As to claim 10, it would have been obvious to one so skilled to extend the set intervals of repetitively fully closing and fully opening valve 12 of Mitacek through substantially all of the polymerizing step as a standard quality control measure - i.e., to monitor and control reaction conditions and input component quantities in the polymerization process over the course of the reaction.

Accordingly, the embodiments of claims 9 and 10 involving repetitively fully closing and fully opening the take-off valve which is not located in a settling leg are held to have been *prima facie* obvious at the time of invention within the meaning of Section 103.

Applicants' arguments filed May 20, 2005, have been fully considered, but are deemed moot in view of the new grounds of rejection, *supra*.

Claims 1, 2, 4-8, 11-16 and 18-20 are allowable on the present record. Examiner has not, as of the date of this Office action, located or identified any prior art documents that can be used to render the process defined by said claims anticipated or obvious to a person having ordinary skill in the art.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner F. M. Teskin whose telephone number is (571) 272-1116. The examiner can normally be reached on Monday through Thursday from 7:00 AM - 4:30 PM, and can also be reached on alternate Fridays.

Art Unit: 1713

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The appropriate fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FMTeskin/08-01-05


FRED TESKIN
PRIMARY EXAMINER
(1713)